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Mr. Cassin presented a paper entitled "Synopsis of the Falconidæ which inhabit America north of Mexico, and descriptions of new species." Referred to Dr. Wilson, Mr. Ord and Col. McCall.

A note was read from Mrs. C. M. Gambel, accompanying the Journal of her late husband, Dr. Wm. Gambel, of an overland expedition to California in 1849, and giving permission to the Academy to examine and make selections from the manuscript. Referred to the Curators.

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December 27th.

Vice-President BRIDGES in the Chair.

The Committee on Dr. Le Conte's "Descriptions of new Coleoptera from Texas, chiefly collected by the U. S. Boundary Commission," reported in favor of publication in the Proceedings.

*Descriptions of some new Coleoptera from Texas, chiefly collected by the Mexican Boundary Commission.*

Most of the new species described in the following pages, were collected by Mr. Arthur Schott, of the Mexican Boundary Commission under Major Emory; they were procured in the vicinity of Eagle Pass, on the lower portion of the Río Grande. With them were several other species, belonging to genera of less interest, and which are here omitted, because numerous species from other parts of the country yet remain to be described. Those herein contained belong to groups which are particularly interesting, or which have been made the subject of special essays. In the genus *Ophryastes*, I have added descriptions of several contained in my collection from Missouri and California, and added new descriptions of the two species already described by Say and Schönherr, so that the student who may have occasion to refer to the genus, may find in a small space, the distinctive characters of all the species yet known within our territory.

To indicate the importance of accurate collections in distant parts of the country, I may add that, while the collection contained about 110 species of Coleoptera, 40 were new to our fauna. A much greater portion would have been added, had not the very active researches of Lieut. H. Haldeman already discovered a large number of those not included in the forty above mentioned.

Besides the species below described, I have added in the Revision of the Elateridæ of the United States, just published in the 10th volume of the Transactions of the American Philosophical Society, descriptions of two very large species of *Agryppus*, a genus not before fully enrolled in our fauna.

#### CICINDELA Linn.

Among the species belonging to our fauna must be placed *C. curvata* Chevr., and *C. decostigma* Chevr. (Col. Mex. fasc. 2d.) Mexican species which have been found in Texas. The former was collected by the Commission, the latter by Lieut. Haldeman.

*C. vulturina*, supra sericeo-nigra, capite thoraceque virescentibus, labro albo, medio producto, 3-dentato, thorace paulo convexo, postice angustiore, lateribus late rotundatis breviter albo-pilosis, antice posticeque profundissime impresso, tenuiter canaliculato, elytris thorace sesqui latioribus minus convexis, apice late rotundatis non serratis, margine tenui cyanescente, versus basin vage punctatis; subtus purpureo-cyanea; fronte plana, utrinque subtiliter rugosa, glabra. Long. .63-.74.

Eagle Pass. The first joint of the labial palpi of the male is testaceous. This species seems to be most commonly without white marks on the elytra; the color in one specimen is greenish black, in the others it is pure black, at least on the elytra. One specimen has a faint rudiment of an apical lunule; in an-

other the lunule is narrow and divided, and the humerus has a distinct round white spot; in a third there is no humeral spot, but there is a narrow transverse line about the middle, and one-third way from the margin to the suture; a small spot below and inside of this is obsoletely connected with it; the line joining these spots, and which represents the medial band of the elytra, makes an angle of about  $45^\circ$  with the suture. This species is very closely allied to *C. obsoleta* Say, and differs from it principally by the thorax being more convex and distinctly rounded on the sides.

#### TOSTEGOPTERA Blanch.

1. *T. ventricosa*, atra convexa (glabra?) thoracé lateribus rotundatis serratis medio subangulatis confertim grosse punctato, callo pone medium dorsali lævi, disco antice vix obsolete impresso, elytris subsulcatis, confluentius minus profunde punctatis, punctis granulo elevato munitis, costis fere lævibus. Long. .9, lat. .57.

Two females. This species is very different from *S. cribosa* Lec. (Proc. Acad. Nat. Sc. 6, 23), by the punctures of the thorax being smaller and more regular, and by the absence of the distinct flattened surface before the middle; the elytra are also more distinctly sulcate. I am inclined to believe that these species are in reality furnished with hairs or scales when living, and that the little granule observed in each of the large punctures of the elytra is the attachment of such scales. The fine scattered punctures of the under surface are furnished with short hairs, but those of the upper surface are entirely glabrous.

2. *T. æqualis*, atra, convexa, thorace lateribus rotundatis vix serratis medio subangulatis, sat dense minus grosse punctato, pilis albidis consperso, elytris æqualiter sat grosse punctatis, lineis duabus sub-lævibus vix distinctis, sutura elevata punctis paucis notata. Long. .8, lat. .45.

One female. Easily distinguished by the absence of any distinct grooves and the smaller punctures of the elytra. The punctures of the thorax still retain some elongated flattened white hairs, which may originally have been dense; the punctures of the elytra furnish excessively short, almost invisible white hairs.

I have adopted this genus, because it has been recently proposed, and because I have had no leisure yet to examine critically the group to which it belongs; still, after a comparison between the different species, and some of our common species of *Phyllophaga* Harris, (*Ancylonycha* Blanch.) I have failed to discover any reason why they should be separated.

A new species from Texas completes the connection, by possessing with the thick convex body of *Tostegoptera*, the exact sculpture of *Phyllophaga quercina*.

#### ERIRHIPIS Burm.

1. *E. Kernii*, nigra, subtus nitida, longe pallide pilosa, supra subnitida, antennis rufescentibus, clypeo tenuiter marginato, vix emarginato, thorace latitudine brevior, lateribus rotundatis basique luteis, disco punctato, breviter piloso, linea dorsali sublævi subelevata, calloque utrinque vix distincto, elytris plus minusve flavo variegatis, sutura costisque duabus elevatis, interstitiis strigosis et punctatis. Long. .39—.54.

*Euphoria cernii* Haldeman, Stansbury's Exped. to Salt Lake. 374, tab. 9, fig 10. Large numbers of this species have been collected by Lieut. Haldeman in Texas, and by the Boundary Commission at Eagle Pass; the original specimen was obtained by the late Mr. R. Kern near Santa Fe.

The male has the club of the antennæ as long as the remaining portion, and the anterior tibiæ armed with two moderate teeth, the third or upper tooth being hardly visible.

In the female the club of the antennæ is shorter than the rest; the anterior tibiæ are armed with three teeth, of which the two inferior are longer than in the male.

In most specimens the elytra are yellow, with the suture, and some spots especially near the suture, black; the black spots gradually enlarge until the elytra

become entirely black; at the same time the yellow at the sides and base of the thorax becomes reduced and gradually disappears.

2. *E. Clarkii*, rufa, nitida, subtus longe pallide pilosa, clypeo nigro tenuiter marginato, antice submarginato, thorace latitudine brevior, lateribus rotundatis, disco utrinque vitta abbreviata punctoque laterali nigris, punctato, linea dorsali calloque utrinque paulo elevatis lævibus, (breviter piloso?) elytris sutura costisque duabus elevatis, interstitiis punctatis et strigosis, rufo-luteis sutura maculisque pluribus nigris, scutello, pectore, genubus tarsisque nigris, illo gutta rufa ornato. Long. .42—.5.

Several females collected by Messrs. Clark and Schott. This species seems very closely related to the preceding, but the pale color on the thorax extends also along the middle, and the abdomen and feet are rufous; the antennæ and anterior tibiæ are precisely as in *E. Kernii*.

3. *E. Schottii*, nigra, subtus nitida, longe pallide pilosa, supra opaca, clypeo antice truncato, fortius marginato, lateribus tenuiter marginato, vertice piloso subcarinato, thorace latitudine non brevior, lateribus vix rotundatis, basi media late emarginata rufescente, disco parce punctato, breviter pubescente, elytris striolis obscure luteis transversis plus minusve variegatis, sutura costisque duabus elevatis, interstitiis bistriatis vage punctatis. Long. .45—.55.

Several specimens collected at Eagle Pass by Mr. Schott, to whom I take great pleasure in dedicating this species. The club of the antennæ in the male is very long, and the anterior tibiæ have two short teeth at the apex; in the female the club of the antennæ is shorter than the remainder, and the anterior tibiæ are tridentate; the inferior tooth is not, however, elongated as in the two preceding species. It belongs to the same division of the genus as *E. indica*, but the hair on the thorax is not long as in that species. The yellow markings of the elytra are sometimes very abundant and confluent, at other times they are hardly visible; besides the little yellowish red line of the middle of the thorax at the base, a vitta each side of the middle abbreviated at each end can sometimes be seen; the angle each side of the medial emargination is very distinct, while in the two species above described the emargination hardly exists, and the base is almost uniformly broadly rounded.

The beautiful *Dendrobias 4-maculatus* Dupont (Mag. Zool. 1836,) and *Tylosis oculatus* Lec. (Journ. Acad. Nat. Sc., 2d ser. 2, 9) have been added to our fauna. Both have been previously known from Mexico. A remarkable variety of *Tragidion coquus* was also found, in which the yellow spots of the elytra are very small and hardly visible.

#### STENASPIS Dup.

With this genus must be united *Smileceras* Lec., founded upon *Ceraibyx solitarius* Say. The female of this rare species was procured by the Expedition, and differs from the male in having the antennæ two-thirds the length of the body. The 11th joint is not longer than the 10th, and is distinctly transversely impressed; the joints from the fourth, outwards, have the external edge compressed; the third also has a compressed edge beyond the middle.

*Splendens*, nigra, thorace latitudine plus sesqui brevior, subinæquali, irregulariter modice punctato, plagis lævibus relictis, postice constricto lateribus dilatato tubercula laterali obtuso, elytris viridi-æneis nitidis subparallelis rugis profundis parcis intricatis, interstitiis elevatis convexis, parce punctulatis, femoribus læte aurantiacis basi apiceque nigris, antennis nigris extrorsum rufescentibus. Long. 1.37.

Texas, and from Dr. Berlandiere's collection. This species must evidently be referred to the present genus, although the prosternum is much less prominent between the coxæ than in the other species, and the lateral tubercle of the thorax is not very distinct. The anterior lateral tubercle observed in *S. solitaria* is entirely wanting, the sides being almost regularly rounded; the posterior constriction is very deep, and the base is more sinuate than in the other species. The head is precisely as in the preceding. The antennæ are black, with the joints growing brownish red from the fourth, outwards; the articulations are

black. The tibiæ are black, pubescent with yellow hair. The very deep and angular confluent rugosities of the elytra and their shining golden green color will readily distinguish this species.

#### MANNOPHORUS.

*Mesosternum simplex*, haud protuberans; mandibulæ subacutæ; palpi breves, subæquales, articulo ultimo subcylindrico longiore; thorax rotundatus, non armatus ad apicem transversim constrictus et margine prominulo munitus, basi marginatus; elytra costa eburnea ornata, mutica; pedes tenues, femora mutica non clavata, tarsi postici articulo imo paulo elongato; antennæ 11-articulatæ tenues elongatæ, maris articulo ultimo fere diviso.

This genus belongs to the *Elaphidion* group, but is sufficiently distinct from all the others of that group found in our territory. It will probably fall eventually into some of those invented by Mr. Serville, but from the very artificial nature of the arrangement made by him, it is impossible to determine where it may be found.

It differs from *Elaphidion* by the less dilated palpi, as well as by the 11th joint of the antennæ of the male being somewhat divided as in *Eburia* and *Purpuricenus*, approaching most nearly to the latter, but differing from both by the more cylindrical palpi and by the very curious acute collar which surrounds the apex of the thorax, and which projects very conspicuously at the sides. In the form of body it resembles closely *Crossidius testaceus* Lec., and I was at first inclined to refer it to that genus. The mandibles, however, are not at all bifid, and the body, though slightly pubescent, is much less hairy than in *Crossidius*.

*M. lætus*, niger, subtus parce pubescens, capite thoraceque confertim grosse punctatis, hoc rotundato, transverso, læte coccineo, basi apiceque nigro-marginato, disco utrinque paulo elevato, elytris dense punctatis, vittis utrinque duabus angustis flavis, (quarum interior lævigata et elevata,) postice abbreviatis, apice subtruncata. Long. .5—6.

Several specimens. The antennæ of the male are longer, those of the female shorter than the body. The thorax has a faint rudiment of a dorsal line near the base. The inner vitta of the elytra is one fourth from the suture, the outer one is near the margin; they are both abbreviated about one seventh from the tip. Varieties occur with the vittæ shorter, and with a black dorsal spot on the thorax near the base.

#### ELAPHIDION Serv.

1. *E. moestum*, modice robustum, piceum, subnitidum tenuiter cinereo-pubescent, thorace latitudine vix brevior, confertim punctato, lateribus paulo rotundatis, elytris grossius modice punctatis, punctis postice minoribus, apice truncatis, antennis femoribusque muticis. Long. .45—56.

Specimens procured by the expedition at Eagle Pass, and by Dr. Berlandiere in Northern Mexico. Related to *E. pubescens*, but the punctures of the elytra are larger, the color is darker, and the pubescence shorter and more sparse. The thorax of the female is coarsely, that of the male finely punctured.

2. *E. spurcum*, modice elongatum, piceum, parce cinereo-pubescent, pilisque sordide albis irregulariter maculatum, thorace latitudine vix longiore confertim punctato, lateribus rotundatis, elytris sat grosse modice punctatis, punctis postice subtilioribus, apice truncatis, femoribus muticis, antennis articulis 3 et 4 apice spina brevissima armatis. Long. .45.

One specimen. In form and size is very similar to *E. neglectum*, but the thorax has no callosities, and the elytra are slightly truncate and entirely unarmed at the apex. The affinities of this species seem to be with *E. muticum* Newm., but it is much smaller.

3. *E. debile*, elongatum, parce cinereo-pubescent, pilisque sordidis irregulariter conspersum, thorace dense punctato, latitudine paulo longiore, lateribus late rotundatis, linea dorsali fere integra lævi, elytris sat grosse modice puncta-

tis, punctis postis subtilioribus, apice subtruncatis, spina minuta suturali armatis, femoribus muticis, antennis articulis 3—5 spina apicali minuta armatis. Long. .56.

Texas and Northern Mexico. Lieut. Haldeman and Dr. Berlandiere. This species resembles in appearance *E. villosus*, but the glabrous line of the thorax and the absence of the long apical spines of the elytra will at once distinguish it; the spots of yellowish hair on the thorax are inclined to form four vittæ.

The scutellum in the species here described is densely pubescent, but as this seems to be a character in all the species of the genus, I have not mentioned it in the individual descriptions.

#### OPHRYSTES Sch.

A. Thorax lateribus tuberculato-dilatatis, postice subito valde angustatus.

1. *O. latirostris*, niger, dense albido-squamosus, rostro crasso, basi impresso trisulcato, sulcis lateralibus divergentibus, obliquis, profundis, thorace valde transverso, inæquali, grosse parce profundissime punctato, lateribus bituberosis, elytris thorace paulo latioribus, ovalibus, fusco subvariegatis, striis profundis punctatis, interstitiis valde convexis. Long. .5.

One specimen found on the Arkansas River, near the mountains. This species differs from all the following by the obliquity of the lateral grooves of the rostrum, which is also thicker than in the other species.

2. *O. ligatus*, niger, dense sordide albo-squamosus, rostro basi impresso, trisulcato, sulcis lateralibus brevibus obliquis profundis, thorace inæquali, latitudine fere duplo brevior, lateribus dilatatis ad medium subangulatis, parce profundissime punctato, profunde canaliculato, elytris thorace paulo latioribus, striis tenuibus vage punctatis, interstitiis paulo convexis, 2, 4 et 6to irregulariter fusco-nigris. Long. .38.

One specimen, Nebraska. This species most resembles *O. sulcirostris*, but the obliquity of the lateral grooves of the rostrum and the difference of the color will distinguish it. The thorax is more deeply channelled, and is less constricted posteriorly.

3. *O. sulcirostris*, niger, dense albido-squamosus, fusco subvariegatus, rostro basi impresso, trisulcato, sulcis lateralibus brevibus modice profundis, thorace latitudine duplo brevior, canaliculato inæquali, rugoso et grosse parce profundissime punctato, lateribus valde dilatatis, postice subangulatis, elytris thorace paulo latioribus tenuiter striatis striis grosse minus profunde punctatis, interstitiis modice convexis. Long. .34.

Schönherr, Curc. 1, 509 (1833;) 5, 819.

*Liparus sulcirostris* Say, Journ. Acad. Nat. Sc. 3, 316.

One specimen found on the Arkansas River, near the mountains. The thorax is gradually dilated from the anterior constriction to the widest portion, while in *O. latirostris* it is suddenly dilated behind the anterior constriction, and then sinuate, so as to form two lateral prominences, of which the posterior one is larger and less rounded.

4. *O. tuberosus*, niger, albido-squamosus, rostro trisulcato, sulcis lateralibus rectis profundis, thorace latitudine plus duplo brevior valde inæquali grosse profunde punctato, lateribus bituberosis, elytris thorace non latioribus striis vix impressis grosse profunde punctatis, interstitiis 2, 4 et 6to atris. Long. .41.

One specimen, Santa Fé, New Mexico, collected by Mr. Fendler. This species differs from the three preceding, by the rostrum not being transversely impressed at the base, and from the next by the lateral grooves of the rostrum extending between the eyes, by the middle groove being less deep, and by the lateral dilatations of the thorax being much more prominent, as well as by the difference in the arrangement of the dark vittæ of the elytra, and the deeper punctures of the striæ. The scales of the thorax have been removed, in great part, so that I do not know if the color was variegated on that part of the body.

5. *O. vittatus*, niger, albido-squamosus, rostro trisulcato, sulco medio

profundissimo, lateralibus rectis profundis, mox ante oculos abbreviatis, thorace latitudine plus duplo brevior inæquali, parce profunde punctato, lateribus subbituberosis, canaliculato sæpe fusco trivittato, elytris striis vix impressis profunde punctatis, sutura cuprascente, fusca-interstitiis 3, 5 et 7mo fusco-vittatis. Long. .41—.48.

Schönherr, Curc. 1, 509; 5, 819.

*Liparus vittatus* Say, Journ. Acad. Nat. Sc. 3, 316.

Platte and Arkansas Rivers; not rare; found also by the Commission at Eagle Pass. The elytra of the male are but little wider than the thorax, those of the female are more rounded, a little flattened on the back, and about one half wider than the thorax; the dark vittæ of the thorax and elytra appear to be produced, in part, by abrasion, as specimens occur in which they are hardly to be seen. The suture, as far as the first stria, is covered with brown scales, having a slight coppery reflexion.

#### B. Thorax lateribus late regulariter rotundatis.

6. *O. speciosus*, niger supra cupreo-fusco-squamosus, capite albo-squamoso vitta frontali alteraque pone oculos utrinque fuscis, rostro 5-sulcato, sulcis intermediis brevibus haud profundis, thorace latitudine brevior lateribus rotundato parce subtiliter punctato, subtiliter canaliculato, vitta utrinque dorsali alteraque in latere niveis, elytris elongato-ellipticis striis profundis punctatis, interstitiis vix convexis, parce punctulatis, 2, 4, 7mo niveis, lateribus et subtus albo-squamosus. Long. .8.

Eagle Pass, several specimens. This fine species is certainly the most beautiful of this family yet found in the United States: the lateral grooves of the rostrum are situated in the side and converge a little posteriorly; the intermediate grooves occupy the position of the lateral grooves in the species of division (A.) and are very short, not by any means obvious; the vittæ of the thorax are made up of spots placed close together and separated by narrow lines; two or three small spots are scattered between the dorsal vitta and the lateral one; the anterior and posterior constriction, with their rows of punctures are as in the species of the first division, but are hardly apparent in the lateral outline of the thorax, which is regularly curved, only a little indented at base and apex; the elytra of the male are about one-fourth, those of the female about one-third wider than the thorax; the snowy white vittæ are a little irregular in their outline, the elytra beyond the 7th stria are covered with grayish white scales, similar to those of the under surface, and contrasting with the snowy whiteness of the vittæ; the legs are speckled with dark fuscous, but the usual femoral band is not seen.

7. *O. argentatus*, niger, æqualiter argenteo-albo-squamosus, vix variegatus, rostro basi impresso, trisulcato, sulcis angustis profundis, lateralibus postice paulo incurvis, thorace latitudine paulo brevior, inæquali canaliculato, profunde grosse punctato, lateribus late rotundatis, elytris ovalibus, striis vix impressis punctatis, interstitiis paulo convexis. Long. .69.

One female, with the elytra nearly twice as wide as the thorax, found at Vallecitas, California; the anterior and posterior marginal impressions of the thorax are entire and very distinct, uniting with the dorsal line; the color is more uniform than in the other species, nevertheless the elytra are slightly mottled; an occipital line, the sides of the rostrum, and a space behind the eyes are covered with fuscous metallic scales; the dark band of the femora existing in many of the species is more conspicuous in this, on account of the denser white scales of the legs.

8. *O. varius*, niger, albo-squamosus, capite fusco-variegato, rostro bisulcato, basi impresso, versus apicem medio foveato, thorace latitudine non brevior, subinæquali, subcanaliculo, grosse parce punctato, fusco trivittato, lateribus late rotundatis, elytris striis tenuibus minus profunde at grosse punctatis, interstitiis non convexis, 3io 5toque plus minusve fuscis. Long. .35—.44.

Desert of the Colorado, California; chiefly on Larrea Mexicana. The elytra of the male are not wider, those of the female are twice as wide as the thorax.

This species is remarkably different from all those above described by the medial groove of the rostrum being obsolete, except towards the tip, where it appears as an oblong fovea; the lateral grooves are not deep, and end at the transverse impression at the base of the rostrum. Over the body and legs the white scales are intermixed with pale fuscous, giving a dullness to the color; the fuscous stripes of the elytra are very variable, sometimes they are well defined; in other specimens they are confused by fuscous spots on the adjoining interstitial spaces; the dark fascia of the femora is moderately distinct.

9. *O. sordidus*, niger, griseo-fuscoque squamosus, rostro trisulcato, sulcis profundis, lateralibus rectis brevibus, thorace latitudine sesqui brevior, antice subangustato, lateribus late rotundatis parce punctato, subcanaliculato, elytris convexis thorace latioribus, striis vix impressis punctatis, interstitiis planis. Long. .37.

One female specimen, Platte River. The posterior marginal impression of the thorax is indistinct; the anterior one is entire, broad but not deep; the brown and gray scales are intermixed and do not form any well defined spaces; the latter color predominates on the head, and the former on the elytra.

10. *O. decipiens*, piceus (dense?) griseo-squamosus (elytris fusco variegatis?) rostro sulco medio minus profundo antice lato, lateralibus brevibus indistinctis, thorace latitudine non brevior, lateribus antice posticeque paulo rotundatis, disperse profunde punctato, canaliculato, elytris convexis, thorace paulo latioribus, striis modice impressis profunde punctatis, interstitiis paulo convexis. Long. .3.

One male found by the Commission at Eagle Pass. The scales are unfortunately removed in great part, but the elytra at the apex show some appearance of having been variegated with darker marks. Beneath, the body is uniformly and densely covered with grayish scales. The sides of the thorax are nearly straight at the middle, narrowed and rounded slightly at each end; the transverse marginal impressions are visible only in the sides. The rostrum is more flattened above than in any other species, and the middle groove is very indistinct, and so dilated anteriorly that the surface becomes broadly concave; the lateral grooves are very short and not deep. The appearance is very similar to *Epicærus*, but the ciliate thoracic postocular lobes require it to be placed in this genus.

Although but two new species of this interesting genus were procured by the Boundary Commission, I have thought that a short account of all the species known to me, would be useful.

#### PELECYPHORUS Sol.

*P. elatus*, niger, capite profunde impresso, thorace latitudine paulo brevior, lateribus antice latissime reflexis medio angulatis, angulis anticis et posticis distinctis, elytris oblongo-ovalibus, postice acutiusculis, convexis, thorace plus duplo latioribus punctis rugosis minus profundis impressis, lineis tribus suturaeque lævibus, epipleuris subito inflexis, humeris minutis porrectis. Long. 1.3.

A large species, remarkable for the form of the thorax, which is tolerably regularly hexagonal, with all the angles well defined; the sides are very strongly reflexed anteriorly, but become gradually narrower from the lateral angle to the base. This species agrees with *P. confluent* Lec. and the next species, as well as with all the others referred by me to the genus, except *Asida anastomosis*, in having elongate palpi with the last joint strongly securiform, and a large lateral opening between the mentum and the base of the mandibles. The species referred by me to *Euschides* (*Stenomorphus Solier*), have the same form of mouth, but appear to have the last joint of the palpi broader and more regularly triangular. I am doubtful about the generic value of that character, but at present all is confusion in regard to genera of Tenebrionidæ; the prosternum is longitudinally deeply concave between the anterior coxæ, and is not produced posteriorly; the sides of the elytra are not margined, although the epipleuræ are suddenly inflexed.

*P. sordidus*, piceo-niger, capite modice impresso, punctato, thorace latitudine fere sesqui brevior, ante medium angustato, lateribus rotundatis subserratis, deplanatis, subreflexis, confertim grosse inæqualiter punctato, elytris oblongo-

ovalibus, convexis postice subacutis, sutura, margine, costisque utrinque duabus elevatis lineis transversis sinuatis inter se irregulariter convexis. Long. .75—.85.

Arkansas River, near the mountains. The female has the elytra twice as wide as the thorax, and more rounded on the sides than in the other sex. The antepectus is sulcate between the coxæ, but the groove is narrower than in the preceding species. The specimens are covered with an earthy matter, which adheres very strongly.

Another species was found by the Commission, of which only the elytra are preserved; they are obovate, dilated gradually for three-fourths of their length somewhat flattened anteriorly, very declivous, and subacute posteriorly, truncate at base with a well defined margin; lateral margin acute, extending within one-fifth of the apex; the disc is sparsely punctured, and each elytron is marked with three faint elevated ridges obsolete at both ends, and of which the external one is the most distinct. The sculpture of the under surface and the proportions of the legs are exactly those of *P. sordidus*, which it will probably resemble in the form of the thorax. As the characters drawn from the form and sculpture of the elytra are very distinct in this genus, I venture to name this species *P. subcostatus*.

#### MICROSCHATIA Sol.

*M. contorta*, sordide fusca, longiuscula, capite profunde excavato, thorace hexagonali, latitudine vix brevior, angulis lateralibus apice rotundatis, lateribus postice paulo emarginatis, disco canaliculato, inæquali, elytris postice dilatatis, lateribus serrato-tuberculatis, costa discoidali alte tuberculata irregulariter fracta, cum sutura elevata lineis transversis connexa ornatis. Long. .37.

From the collection of the late Dr. Berlandiere; this very ugly insect bears a certain analogy to *Asida anastomosis* Say, in appearance, but is very distinct by the hexagonal thorax, and more rough elytra; the discoidal costa ends about one-fourth from the apex in a high tubercle; the marginal series of tubercles ends by bending inwards to the suture about one-sixth from the apex.

The maxillary palpi are small, and can be almost entirely concealed behind the mentum, which not only fills up the progenial cavity, but abuts against the mandibles, entirely covering the mouth beneath; this is also the case in *Asida anastomosis*, and in the two species of *Microschatia* described by me (Ann. Lyc. 5, 129,) which are properly congeneric with that species; it remains still to be determined whether they should enter Solier's genus, of which only one species was known to the inventor.

The present species differs from all the others mentioned in having the third joint of the antennæ not longer than the fourth; the prosternum is broadly produced posteriorly, as in *M. inæqualis*.

*Asida anastomosis*, incorrectly referred by me to *Pelecyporus*, has the prosternum regularly rounded and not produced posteriorly.

#### TRICORPHUS Lec.

*T. nodiceps*, ater, minus nitidus, capite subtilius postice densius punctato, lateribus margine tenui reflexo, fronte tuberculo magno obtuso ornata, thorace transverso punctato, basi marginato, lateribus rotundato, angulis anticis porrectis, elytris ventricosis rotundatis thorace plus duplo latioribus, 9-seriatim punctatis. Long. .33.

One specimen: Eagle Pass. Differs from the three species described by me (Ann. Lyc. 5, 141) in the less punctured head, the much larger frontal tubercle and by the wider and more inflated elytra.

#### EMBAPHION Say.

1. *E. concavum*, elongato-ellipticum, nigrum, thoracis et elytrorum lateribus altissime reflexis, illo antrorsum angustato disco parce punctulato, lateribus parcius subtilius muricatis, elytris subtiliter muricato-punctatis, brevissime hispidis. Long. .78, lat. .4.

One specimen. Resembles *E. muricatum* Say, but is longer and narrower, with the broad margin of the elytra more suddenly reflexed and almost perpendicular. Although so different in form, this genus is only distinguished from *Eleodes* by the inferior plane of the mentum being more rounded and more deeply impressed; its anterior margin is slightly incised; the lateral angles are so much inflexed as to be invisible; the tarsi are sulcate beneath, and fringed at the apex and sides with short spines; the middle joints of the posterior tarsi appear more elongated than in *Eleodes*. I have great doubt of the generic value of any of these differences, and several nondescript species from New Mexico seem to be intermediate, both by the form of the body and by the differences in the mentum.

LYTTA Linn.

1. *L. fulvipennis* Lec., Proc. Acad. Nat. Sc. 6, 33, though smaller, does not appear sufficiently different from *L. cardinalis* Chev., Col. Mex. cent. 1.

2. *L. cribrata*, atra, capite thoraceque nitidis, punctis paucis impressis, illo macula frontali magna sanguinea, hoc lateribus sanguineis, rotundato, disco bifoveato, vix canaliculato, elytris opacis lineis elevatis irregulariter reticulatis, thorace fere duplo latioribus. Long. .77.

One specimen. This species having the joints of the antennæ oval, and the labrum slightly emarginate, and the outer spur of the posterior tibiæ obtuse, belongs to division A—c of my essay on this genus, (Proc. Acad. 6, 331;) the outer joints of the antennæ are hardly thicker than those near the base; they extend to about the anterior third of the elytra. *L. reticulata* Say (Journ. Acad. Nat. Sc. 3, 305) must resemble this species, but is said to be entirely black, tinged slightly with green. The antennæ are said to be thickened towards the tip, and the punctures of the thorax confluent posteriorly.

3. *L. morio*, atra immaculata, confertim subtiliter punctata, brevissime pubescens, thorace latitudine paulo brevior, subcanaliculato, angulis anticis rotundatis, labro vix emarginato, tibiis posticis calcare externo paulo latiore. Long. .4—53.

This species resembles *L. pensylvanica*, but is larger and more robust, and the thorax is wider; in form it precisely resembles *L. fissilabris* Lec., but the labrum is very slightly emarginate, and the spurs of the posterior tibiæ are not equal. The head, as in *L. pensylvanica*, has a fine glabrous, longitudinal line.

4. *L. sublineata*, elongata, nigra subtiliter dense punctulata, dense luteo-griseo pubescens, thorace capite sesqui angustiore, latitudine paulo longiore, lateribus parallelis antice rotundatis, disco late canaliculato, macula utrinque denudata ad medium ornato, elytris minus dense pubescentibus, sutura, margine, apice vittaque lata postice abbreviata densius griseo pubescentibus, lineis tribus tenuissimis denudatis atris, tarsis palpis antennisque nigris, his articulo 2do 3io paulo brevior. Long. 1.05.

One female, with the first joint of the antennæ extending to the posterior margin of the eyes. This fine species resembles *L. immaculata* and *longicollis*, but the thorax is less convex, and the unequal distribution of the pubescence will distinguish it. The posterior tibiæ appear black, but I do not think that this will be found to be a constant character.

5. *L. fulvescens*, nigra elongata dense subtiliter pubescens, densissime luteo-fulvo-pubescens, thorace capite paulo angustiore, latitudine longiore, lateribus parallelis antice rotundatis, canaliculato, elytris thorace paulo latioribus immaculatis, antennis tarsisque nigris, illis articulo 2do 3io fere æquali, palpis testaceis, apice nigris. Long. .59—68.

Several specimens; found also by Lieut. H. Haldeman in Texas. Resembles *L. longicollis*, but is smaller and without any denuded humeral spot. By the color of the palpi it also differs from all the allied species. The first joint of the antennæ extends a little beyond the posterior margin of the eyes in the male; in the female it is a little shorter.

*L. ferruginea* Say, *L. conspersa* Lec. and *L. immaculata* Say, besides *L. my-*

labrina *Chevr.* and *L. convexa* *Lec.*, already known from that region, are also contained in the collection.

The Committee on Dr. Leidy's paper on "*Bathygnathus borealis*, an extinct Saurian of the new Red Sandstone of Prince Edwards Island," reported in favor of publication in the Journal.

The Committee on a paper by Mr. Conrad, "Monograph of the genus *Argonauta*, with descriptions of five new species," reported in favor of publication in the Journal.

The Committee on the two following papers by Mr. Conrad, reported in favor of publication in the Proceedings.

*Synopsis of the Genera CASSIDULA, Humph., and of a proposed new genus ATHLETA.*

By T. A. CONRAD.

CASSIDULA, *Humph.*, MELONGENA, *Schum.*

The genus CASSIDULA was founded by Humphreys on *Buccinum calcaratum* (Solander,) who included *Murex melongena*, Lin. and a Florida shell which he terms *M. cornuta*, and cites *Buccinum trames*, Solander. This may be *Murex corona*, Gmel.

I know of but one fossil species of this genus, if indeed it really belongs to it, in the Eocene formation. I propose it at present as the type of a subgenus, to which I can refer no other species.

Subgenus LACINIA, *Con.*

Globose; pillar lip widely reflected, callous; basal emargination profound; base dilated.

I have given a name to this subgenus which Humphreys applied to some unknown shell without describing it.

*Fossil species, (Eocene.)*

C. (Lacinia) ALVEATA.

*Melongena alveata*, Silliman's Journ. Jan. 1833, xxiii, p. 344: CON. Tert.

Foss. p. 37, pl. 15, fig. 2.

*Pyrula Smithii*, LEA. Cont. to Geol. p. 153; pl. 5, fig. 162. Dec. 1833.

Locality. Claiborne, Alab.

*Miocene species.*

C. LAINEI,

*Pyrula Lanei*, BAST. GRATELOUP. Conch. Foss. des Terr. Tert. Pl. 1, fig. 2, 3, 8.

C. STROMBOIDES. *Pyrula stromboides*, BAST. GRAT. ib. 2, 3.

*Recent Species.*

C. HIPPOCASTANUM.

*Murex hippocastanum*. Born. Mus. 1780, p. 309. Dillwyn. Cat. p. 710.

*Buccinum calcaratum*, SOLAND.

*Cassidula calcarata*, HUMPH. Cat. 1797, p. 32.

*Murex calcaratus*, DILLWYN. Cat. p. 710.

*Pyrula galeodes*, LAM. An. sans vert. (Desh. ed.) ix. p. 517. Reeve. Mon.

*Pyrula*, No. 22.

Inhabits Island of Samar, Philippines.

C. MELONGENA.

*Murex melongena*, LIN. Martini. ii. p. 74. t. 39, fig. 389. Dillwyn. Cat. p. 710.

*Pyrula melongena*, LAM. An. sans Vert. ix. p. 509.

Inhabits the West Indies.

C. BISPINOSA,

*Pyrula bispinosa*, PHILIPPI, Abb. und Besch. Conch. *Pyrula*, pl. 1, fig. 7, 8.

REEVE. *Pyrula*, No. 18.

Inhabits

## C. PATULA.

Inhabits Bay of Caraccas (on mud banks,) Cuming.

## C. CORONA.

*Pyrula patula*, BROD. and LOW. Zool. Journ. iv, p. 377. REEVE, PYRULA, No. 20.

*Murex corona*, GMEL.

*Fusus corona*, LAM. An. sans Vert. (ed. of Desh.) ix, p. 453.

*Buccinum ornatum*, SAY. Journ. A. N. S. ii, p. 229.

*Melongena corona*. Silliman's Journ. (new series) ii, p. 297.

Inhabits Florida.

## C. ? PARADISIACA.

*Pyrum paradisiacum*, MARTINI, iii, pl. 94, fig. 909, 910.

*Pyrula nodosa*, LAM. An. sans Vert. (ed. of Desh.) ix, p. 518.

Inhabits Ceylon, Mozambique, &c.

## ATHLETA, Con.

Ovate, voluta-shaped; spire short, acute; columella with plaits as in VOLUTA.

A callous projecting on the shoulder, and covering a portion of the spire.

## A. RARISPINA.

*Voluta rarispina*, LAM. An. sans Vert. (Desh. ed.) x, p. 426. Enc. Method. pl. 384, fig 2.

Locality, Dax, in Miocene.

## A. AFFINIS.

*Voluta affinis*, BRONG. Grateloup. Tert. Foss. pl. 1, fig. 16, 20. *V. rarispina*, jun, DESH.

## A. TUOMEYI, Con.

Ovato-turbinate, with revolving lines distinct on the lower half and obsolete above on the body whorl; shoulder with distant prominent acute spines; between the spines and suture the side is flattened, swelling a little near the suture, and has a few revolving raised unequal lines; penultimate whorl concealed by the callous, above which the whorls are finely tuberculated and somewhat turritid; columella with 2 prominent plaits and 3 obsolete ones. Length 1½ inch.

Locality. Bashia creek, Clarke co., Alab.

I have given Mr. Tuomey's name to this interesting shell which was originally referred by him to *V. Sayana* with doubt. Mr. Tuomey says the group of fossils in this locality are very distinct from those of Claiborne, and I have no doubt the deposit will prove to be an upper bed of the Eocene which may, when the fossils are all collected, be found to contain some of the species of the Older Miocene as it occurs at Vicksburg, Miss. The *Athleta Tuomeyi*, though a very distinct shell, is related to a Miocene fossil of Dax, (*A. rarispina*), which is an abundant species. The genus appears to have no living representative.

## Omissions and Corrections to the Synopsis of the North American Naïades.

By T. A. CONRAD.

*U. perobliquus*, Conrad. Monog. p. 51, pl. 27, fig. 2.

*U. Rangianus*, (female,) Lea. 1838, vi, 95, 18, 56.

*U. Sageri*, Conrad. Monog. p. 53, pl. 29, fig. 1.

*Stroph. Etowaensis*, instead of *Etowaosis*, see Proceed. A. N. S. vi. p. 263.

*Monodontina Buschiana*, Conrad. (Marg. Vondenbuschiana, Lea.) ib. p. 269.

*U. pectitus* belongs to Agassiz's proposed genus SCALENARIA.

*U. Aberti* . . . . . CYPROGENIA.

*U. fragosus, nobilis, apiculatus* . . . . . QUADRULA.

## Note on Requienia? Sensenti.

I propose, in the uncertainty of the reference of this shell, to institut sub-genus, under the name of ARIETINA.

Inequivalved; both valves deep, with involute beaks.

The Committee on Mr. Cassin's "Synopsis of the Falconidæ, &c.," reported in favor of publication in the Proceedings.

*Synopsis of the Species of FALCONIDÆ which inhabit America north of Mexico; with descriptions of new species.*

BY JOHN CASSIN.

# I. Subfamily FALCONINÆ.

## 1. Genus FALCO, Linn.

1. *Falco anatum*, Bonaparte. Comp. List., p. 4, (1838). Wilson. Am. Orn., ix. pl. 76. Aud. B. of Am., pl. 16.  
*Hab.* Eastern North America, Cuba.
2. *Falco nigriceps*, Cassin. Birds of California and Texas, i. p. 87, (1853).  
*Hab.* Western North America, Chili.
3. *Falco polyagrus*, Cassin. Birds of California and Texas, i. p. 88, (1853).  
*Hab.* Oregon, California.

## 2. Genus HIEROFALCO, Cuvier.

1. *Hierofalco sacer*, (Forster.) Aud. B. of Am., pl. 196.  
*Falco sacer*, Forster. Philos. Trans. London, LXII. p. 423, (1772.)  
" *Falco islandicus*," Aud. Orn. Biog., ii., p. 552.  
*Hab.* Northern regions, Greenland, Labrador.

## 3. Genus HYPOTRIORCHIS, Boie.

1. *Hypotriorchis columbarius*, (Linn.) Wilson. Am. Orn., ii., pl. 15, fig. 3.  
Aud. B. of Am., pl. 75, 92.  
*Falco columbarius*, Linn. Syst. Nat., i., p. 128, (1766).  
*Hab.* Throughout North America.

## 4. Genus TINNUNCULUS.

1. *Tinnunculus sparverius*, (Linn.)  
*Falco sparverius*, Linn. Syst. Nat., i., p. 128, (1766).  
*Hab.* The entire continent of America.

# II. Subfamily ACCIPITRINÆ.

## 1. Genus ASTUR, Lacepede.

1. *Astur atricapillus*, (Wilson.) Wilson Am. Orn., vi., pl. 52, fig. 3. Aud. B. of Am., pl. 141.  
*Falco atricapillus*, Wilson. Am. Orn., vi., p. 80, (1812).  
*Hab.* Northern and Eastern North America.

## 2. Genus ACCIPITER, Brisson.

1. *Accipiter Cooperii*, (Bonaparte.) Bonap. Am. Orn., ii., pl. 1. Aud. B. of Am., pl. 36, 141.  
*Falco Cooperii*, Bonap. Am. Orn. ii., p. 1, (1828).  
*Hab.* Throughout North America.
2. *Accipiter mexicanus*, Swainson. Faun. Bor. Am. Birds, p. 45, (1831).  
*Hab.* California, Mexico.
3. *Accipiter fuscus*, (Gmelin.) Wilson. Am. Orn., v., pl. 45, fig. 1. Aud. B. of Am., pl. 374.  
*Falco fuscus*, Gm. Syst. Nat., i., p. 280, (1788).  
*Hab.* Throughout North America.

## III. Subfamily BUTEONINÆ.

## 1. Genus BUTEO, Cuvier.

1. *Buteo borealis*, (Gmelin.) Wilson Am. Orn., vi., pl. 52. Aud. B. of Am. pl. 51.

*Falco borealis*, Gmelin. Syst. Nat., i., p. 266, (1788).

*Hab.* Eastern North America, Fur countries, Wisconsin, Florida, Cuba, Jamaica.

2. *Buteo Swainsoni*, Bonaparte. Comp. List, p. 3, (1838). Rich. and Sw. Fauna Boreali Americana, Birds, pl. 27. Aud. B. of Am., pl. 372.

"*Buteo vulgaris*." Rich. and Sw. and Aud.

*Hab.* Western North America, Oregon, California.

3. *Buteo lineatus*, (Gmelin.) Wilson. Am. Orn., pl. 53, fig. 3. Aud. B. of Am., pl. 56, 71.

*Falco lineatus*, Gmelin. Syst. Nat., i., p. 268, (1788).

*Hab.* Throughout North America.

4. *Buteo Bairdii*, Hoy. (New species.)

Size smaller than *B. lineatus*, wings long and pointed, with the third primary longest, second rather longer than the fifth, first about the same length as the sixth. Entire plumage of the upper parts dark brownish with a purplish lustre, especially obvious on the primaries. Plumage of the head and neck behind and some feathers on the back edged and tipped with yellowish white, upper tail coverts yellowish white with transverse bars of brown. Tail above dark ashy brown, with about ten bands of dark brown and tipped with white. Entire under parts and under wing coverts fine pale yellowish white with a few sagittate spots of brown on the sides, and a distinct stripe of brown running downwards from the corner of the mouth. Front at the base of the upper mandible white. Cere, legs and irides yellow.

Younger? Entire upper parts very dark brown or nearly black with purplish lustre, and entire under parts with almost every feather having a large longitudinal stripe or spot of the same, this color (brownish black) predominating on the breast, and on the throat assuming the form of narrow longitudinal stripes. Flanks and under wing coverts with rounded spots of white. Tibiæ dark brown with transverse bars and rounded and oval spots of pale reddish white. Upper tail coverts reddish white with their outer edges brown, and with transverse stripes of brown. Under tail coverts yellowish white with transverse stripes of brown. Stripes from the corners of the mouth wide and conspicuous. Front white, cheeks yellowish white. Sex unknown.

*Dimensions*.—Female. Total length 19½ inches, wing 14, tail 8, extent of wings 48 inches, tail about an inch longer than the folded wings.

*Hab.* State of Wisconsin.

*Obs.*—Two specimens of this remarkable *Buteo* are now in the collection of the Academy, for which it is indebted to Mr. William Dudley, Secretary of the Wisconsin Natural History Association, and to P. R. Hoy, M. D., of Racine, Wisconsin. It bears a general resemblance to the European *B. vulgaris*, and also to *B. pennsylvanicus*, but is quite different from either and from any other species known to me.

Accompanying Dr. Hoy's specimen were some interesting notes of the manners of this species, with measurements of the recent bird. It is named by him in honor of our mutual and highly esteemed friend Professor Spencer F. Baird, of the Smithsonian Institution, one of the most eminent of American naturalists, and whose exertions have contributed in a most important manner to the development of the natural history of the United States.

5. *Buteo pennsylvanicus*, (Wilson.) Wilson. Am. Orn., vi., pl. 54, fig. 1. Aud. B. of Am., pl. 91.

*Falco pennsylvanicus*, Wilson. Am. Orn., vi., p. 92, (1812).

*Hab.* Eastern North America.

6. *Buteo Harlani*, (Aud.) Aud. B. of Am., pl. 86

*Falco Harlani*, Audubon. Orn. Biog., i., p. 441, (1831).

*Hab.* Louisiana, Mexico.

2. Genus *ARCHIBUTEO*, Brehm.

1. *Archibuteo sancti-johannis*, (Gmelin.) Wilson. Am. Orn., vi. pl. 53. Aud. B. of Am., pl. 422.  
*Falco sanctijohannis*, Gm. Syst. Nat., i., p. 273, (1788).  
*Hab.* Eastern North America.
2. *Archibuteo lagopus*, (Gmelin.) Wilson. Am. Orn., iii., pl. 33. Aud. B. of Am., pl. 166.  
*Falco lagopus*, Gm. Syst. Nat., i., p. 260, (1788).  
*Hab.* Throughout North America.
3. *Archibuteo ferrugineus*, (Lichtenstein.) Gray. Genera of Birds, i., pl. 6.  
*Falco ferrugineus*, Licht. Trans. Berlin Acad., 1832, p. 429.  
*Hab.* California.

IV. Subfamily *MILVINÆ*.1. Genus *NAUCLERUS*, Vigors.

1. *Nauclerus furcatus*, (Linn.) Wilson. Am. Orn., vi., p. 51. Aud. B. of Am. pl. 72.  
*Falco furcatus*, Linnæus. Syst. Nat., i., p. 129, (1766).  
*Hab.* Southern and Central North America.

2. Genus *ELANUS*, Savigny.

1. *Elanus leucurus*, (Vieillot.) Bonap. Am. Orn., ii., pl. 11. Aud. B. of Am. pl. 352.  
*Milvus leucurus*, Vieill. Nouv. Dict. d'Hist. Nat., xx., p. 563, (1819).  
*Hab.* Southern North America, California, South America.

3. Genus *ICTINIA*, Vieill.

1. *Ictinia mississippiensis*, (Wilson.) Wilson. Am. Orn., iii., pl. 25, fig. 1.  
Aud. B. of Am., pl. 117.  
*Falco mississippiensis*, Wilson. Am. Orn., iii., p. 80, (1811).  
*Hab.* Southern North America.

4. Genus *ROSTRHAMUS*, Lesson.

1. *Rostrhamus sociabilis*, (Vieillot.) Spix. Av. Bras., i., pl. 2.  
*Herpetotheres sociabilis*, Vieill. Ency. Meth., i., p. 1248, (1823).  
*Hab.* Florida, South America.

5. Genus *CIRCUS*, Lacepede.

1. *Circus hudsonius*, (Linn.) Wilson. Am. Orn., vi., pl. 51, fig. 2. Bonap. Am. Orn., ii., pl. 10, fig. 1.  
*Falco hudsonius*, Linn. Syst. Nat., i., p. 128, (1766).  
*Hab.* Throughout North America.

V. Subfamily *AQUILINÆ*.1. Genus *AQUILA*, Mœhring.

1. *Aquila chrysaetos*, (Linn.) Wilson. Am. Orn., vii., pl. 55, fig. 1. Aud. B. of Am., pl. 81.  
*Falco chrysaetos*, Linn. Syst. Nat., i., p. 125, (1766).  
*Hab.* Throughout North America.

2. Genus *HALIAETUS*, Savigny.

1. *Haliaëtus pelagicus*, (Pallas.) Cassin, Birds of California and Texas, i., pl. 6.  
*Aquila pelagica*, Pallas. Zoographia Rosso-Asiatica, i., p. 343, (1811).  
*Hab.* North Western America.
2. *Haliaëtus Washingtonii*, (Audubon.) Aud. B. of Am., pl. 11.  
*Falco Washingtonii*, Aud. Orn. Biog., i., p. 53, (1831).  
*Hab.* Kentucky. Western?

3. *Haliaëtus albicilla*, (Linn.) Gould. B. of Eur., i., pl. 10.

*Vultur albicilla*, Linn. Syst. Nat. i., p. 123, (1766).

*Hab.* Northern North America, Greenland.

4. *Haliaëtus leucocephalus*, (Linn.) Wilson. Am. Orn., iv., pl. 36. Aud. B. of Am., pl. 31, 126.

*Falco leucocephalus*, Linn. Syst. Nat., i., p. 124, (1766).

*Hab.* Throughout North America.

### 3. Genus PANDION, Savigny.

1. *Pandion carolinensis*, (Gmelin.) Wilson Am. Orn., v., pl. 37, fig. 1. Aud. B. of Am., pl. 81.

*Falco carolinensis*, Gm. Syst. Nat. i., p. 371, (1788).

*Hab.* Throughout North America.

### 4. Genus POLYBORUS, Vieillot.

1. *Polyborus brasiliensis*, (Gmelin.) Aud. B. of Am., pl. 161.

*Falco brasiliensis*, Gm. Syst. Nat., i., p. 262, (1788).

*Hab.* Southern North America, Texas, Mexico.

### 5. Genus MORPHNUS, Cuvier.

1. *Morphnus unicinctus*, (Temminck.) Aud. B. of Am., pl. 392.

*Falco unicinctus*, Temm. Pl. Col., i., p. (liv. 53, about 1827.)

*Falco Harrisii*, Aud. Orn. Biog., v., p. 30, (1839).

*Hab.* Southern North America, Texas, Mexico.

*Obs.*—The above comprise all the species which have been well established as occurring within that portion of North America which is north of Mexico. Of these species several are of exceedingly rare occurrence, but the greater part are of sufficient abundance to be readily studied by the ornithologist or obtained by the collector, and of all of them there are specimens in the collection of the Academy. Of *Buteo Harlani* there is one specimen which, when in the Rivoli collection, was pronounced to be that species by Mr. Audubon, but which does not correspond with his plate and description so well as other specimens of a different species from Mexico, now in the collection, and of this species alone have I doubts about the correct name. It is in all probability a common Mexican bird, though whether previously described or not I am not at present prepared to say.

The object of this synopsis being mainly to give the correct nomenclature and date of original description, the numerous synonymes of North American Falconidæ have been omitted, though they will be carefully inserted in my Synopsis in Birds of California and Texas, parts 3 and 4.

In addition to the above species, there are in the collection of the Academy several specimens, principally western and northern, which have been referred with doubt to known species, but which I hope to further examine with the advantage of other collections from the same localities.

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The Recording Secretary read his Annual Report, as follows :—

### REPORT

#### OF THE RECORDING SECRETARY

For 1853.

During the past year, from Dec. 1, 1852, to Dec. 1, 1853, there have been elected fifty-one Members and eleven Correspondents.

Four members have died, to wit: Prof. W. E. Horner, M. D., Mr. Francis Lennig, John Price Wetherill, late Vice-President of the Academy, and Mr. Richard H. Kern, who was killed a few months since by the Indians, at the time of the massacre of Captain Gunnison's party, on the Sevier river.

During the past year, from January 1, to December 1, 1853, the following papers have been read before the Academy, referred to Committees, and upon their report, published in the Journal and Proceedings of the Academy.

By John Cassin, three, to wit: 1. Description of a new species of the genus *Scalops*, from Oregon, in the collection of the United States Exploring Expedition. 2. Catalogue of the *Hirundinidæ*, in the collection of the Academy of Natural Sciences of Philadelphia, July 1, 1853. 3. Descriptions of new species of *Hirundinidæ* and *Psittacidæ*, specimens of which are in the Collection of the Academy of Natural Sciences of Philadelphia.

By Mr. T. A. Conrad, three, to wit: 1. Synopsis of the North American *Naiades*. 2. On new species of *Unio*—published in the Journal. 3. Monograph of the genus *Fulgur*.

By Frederick A. Genth, Ph. D., two, to wit: 1. On a variety of gray Copper, perhaps a new mineral. 2. On *Owenite*, a new mineral.

By Charles Girard, five, to wit: 1. Descriptions of new Nemertians and Planarians, from the coast of the Carolinas. 2. Observations upon the American species of the genus *Esox*. 3. Note upon a nest constructed by Catfishes. 4. Descriptions of some new Fishes, from the river Zuni. 5. List of Reptiles, collected in California by J. L. Le Conte, with descriptions of New Species.

By the Rev. M. J. Berkeley, M. A., F.L.S., and Rev. M. A. Curtis.—Exotic Fungi, from the Schweinitz Herbarium, in the Academy of Natural Sciences of Philadelphia.

By Spencer F. Baird and Charles Girard, four, to wit: 1. Descriptions of new species of Fishes, collected by Captains R. B. Marcy and George B. McClellan, in Arkansas. 2. Descriptions of new species of Fishes, collected by Mr. John W. Clarke, in the United States and Mexican boundary survey, under Lieut. Col. James D. Graham. 3. Descriptions of new species of Reptiles, collected by the United States Exploring Expedition. 4. Researches upon Nemertians and Planarians.

By Francis N. Green, M. D.—Chemical investigation of remains of Fossil Mammalia.

By S. S. Haldeman.—Descriptions of some new species of Insects, with observations on described species.

By Edward Hallowell, M. D.—On some new Reptiles from California.

By Adolphus L. Heermann, M. D.—Catalogue of the Oological Collection in the Academy of Natural Sciences, Philadelphia.

By Pliny R. Hoy, M. D.—Three, to wit: Notes on the Ornithology of Wisconsin, three papers.

By Prof. W. G. Harvey and Prof. J. W. Bailey.—New species of *Diatomaceæ* collected by the United States Exploring Expedition.

By Isaac Lea.—1. Notice of the *Mya nodulosa*, Wood. 2. On the *Castalia sulcata*, Krauss.

By Major John Le Conte, F.L.S.—1. Description of a new species of *Păcâne* Nut. 2. Descriptions of three new species of *Arvicola*, with remarks upon other North American Rodents. 3. Observations on *Crotalus horridus* and *C. durissus*.

By John L. Le Conte, M. D., seven, to wit: 1. Descriptions of twenty new species of *Coleoptera*, inhabiting the United States. 2. Synopsis of the *Silphales* of America, North of Mexico. 3. Synopsis of the *Scaphidilia* of the United States. 4. Synopsis of the species of the *Histeroid* genus *Abraeus*, inhabiting the United States. 5. Synopsis of the *Meloides* of the United States. 6. Synopsis of the *Endomochydeæ* of the United States. 7. Synopsis of the *Atopidæ*, *Rhipiceridæ* and *Cyphonidæ* of the United States.

By Lieut. Maury, U. S. N.—Observations on Atmospheric Pressure.

By Dr. S. Weir Mitchell.—On the influence of certain states of Respiration on the Pulse.

By M. C. Read.—Notes on the birds of Northern Ohio.

By S. W. Woodhouse, M. D.—1. Description of a new species of pouched Rat, of the genus *Dipodomys*, Gray. 2. Description of a new species of Mouse, of the genus *Hesperomys*. In all 44.

During the past year the By-laws have been altered as follows :

Art. III. of Chapter III., strike out the word *fifty* and insert *one hundred*, making the clause to read as follows :

Art. III. But any member who shall pay into the hands of the Treasurer the sum of one hundred dollars shall be exempt from all future semi-annual contributions.

Art. I. of Chapter VIII, altered to read as follows :

Any Specimen belonging to the Academy and not presented under restrictions, may be loaned to members or correspondents for purposes of scientific investigation by the consent of three-fourths of the Curators, and for a period not exceeding three months; any person to whom specimens may be loaned shall first deposit with the Curators a sum, not less than Fifty Dollars, in cash, which they may deem necessary to ensure the safe return of the specimen, and he shall be subject to a fine equal in amount to one-third of the security given, for each month that the specimen may be retained beyond the time specified for its return. The specimen loaned, together with the date at which its return may be due, shall be reported to the Academy by the Curators at the meetings for Business in March, June, September and December.

All of which is respectfully submitted by

B. HOWARD RAND,  
Recording Secretary.

The Librarian read the following :

#### REPORT FOR 1853.

The entire additions to the Library for the present year amount to 1011; of which 436 are in volumes, 432 in parts or numbers, and the remaining 143 in pamphlet form. They may be classified as follows :

|                                                                       | Volumes. | Parts or Nos. | Pamphlets |
|-----------------------------------------------------------------------|----------|---------------|-----------|
| Natural Sciences, . . . . .                                           | 248      | 120           | 75        |
| Anatomy and Physiology, . . . . .                                     | 25       | 16            | 23        |
| Physical Science and Chemistry, . . . . .                             | 19       |               | 13        |
| Journals, Transactions, Proceed-<br>ings, &c. of Societies, . . . . . | 91       | 295           | 8         |
| Voyages and Travels, . . . . .                                        | 16       |               | 1         |
| Geography, . . . . .                                                  | 5        | 1             |           |
| Biography, . . . . .                                                  | 1        |               | 3         |
| Languages, . . . . .                                                  | 2        |               |           |
| Agriculture, . . . . .                                                | 4        |               | 1         |
| Miscellaneous, . . . . .                                              | 25       |               | 19        |
| Totals,                                                               | 436      | 432           | 143       |

Of the whole number, we have received from Authors 68, from Editors 39; from Societies and Corporations 170; from Dr. Wilson 266; from Edward Wilson, Esq. 407; from other Members, Correspondents, &c. 56; and from the United States Government 5. Total 1011.

The number of volumes now in the Library may be estimated at nearly 16,000, including tracts bound in volumes, or arranged for binding. Of these about 5000 are on subjects of Natural Science, nearly 3000 volumes of Transactions, and about 1500 volumes of Voyages and Travels, and Anatomy and Physiology.

An opportunity for a correct enumeration will be afforded, it is hoped, during the coming year, when the contemplated enlargement of the accommodations for the Library will be completed.

The increase in the number of additions this year from Foreign Societies is very gratifying, most of them having been obtained by exchange of publications.

Further effort might, however, secure many other important acquisitions to the list, which are much needed, and frequently inquired for.

The necessity for a Library Fund, for binding and incidental expenses is becoming every year more urgent. For a long period the Society has been unable to make any provision of this kind from the Treasury, in consequence of which large collections of Tracts, Periodicals, and volumes bound in paper, have accumulated, and are with difficulty preserved from loss or injury.

We have now many hundred such volumes, and certainly not less than 2500 Tracts, the binding of which, however plainly and economically done, would require a considerable expenditure. The improved condition of the Treasury of late will perhaps authorise an appropriation to this object at present, and whenever hereafter a surplus fund at the end of each year would admit of it, subject to the approbation of the Treasurer. The attention of the Society to this matter is earnestly requested.

We hope, however, that the day is not distant, when a permanent Library Fund will be established, not simply for meeting the ordinary expenses of a large Library, but sufficient for a regular annual outlay for new scientific publications.

Respectfully submitted by

WM. S. ZANTZINGER,  
Librarian.

*Hall of the Academy of Natural Sciences, December 27, 1853.*

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The following Report was read by Dr. Leidy :—

#### REPORT OF THE CURATORS FOR 1853.

The great increase of the Cabinet of the Academy has rendered an enlargement of its building absolutely necessary, not only to accommodate new collections which may be received, but also to arrange those already in our possession. The means through which this much desired object has nearly been accomplished, were obtained from members of the Society and liberal citizens of Philadelphia; and we shall soon have almost double the space previously occupied by the museum. The alterations and enlargement of the building, now in progress of completion, mainly consist of an additional story, the floor of which rests upon the upper gallery of the former hall. The new hall has three ranges of galleries, while the former, in its present condition, has but two.

The natural history collections are to be removed from the east basement room to the upper halls, and this is to be appropriated to the library, which then will occupy the entire basement of the building, except a room for unpacking, &c., and a small office for the Committee of Publication.

Another important arrangement to be made is the construction of small rooms for the different committees, which will afford increased facilities in the transaction of business and the arrangement of the museum. Four of these will be made in the upper hall, and three in the lower one.

During the year just about closing, the donations to the museum, except in one department, that of comparative anatomy, have been unusually small, which, however, in part arises from the approaching completeness of several of its collections. The donations in the different classes of natural history are as follows:

*Mammalia*.—Of this class 32 species have been presented, principally by Dr. Heermann, Dr. Watson, Col. McCall, and Mr. J. Krider.

*Aves*.—Of mounted specimens of birds, and of bird-skins, there have been received 107 of 73 species, of which one collection of 23 species of birds of California was presented by Dr. Heermann, and 32 species collected in the western territories were presented by Col. McCall.

Of nests, those of 2 species of birds, and of eggs, those of 4 species have been presented.

*Reptilia*.—Of this class 57 specimens of 35 species have been presented, principally by the Smithsonian Institution. Besides these Dr. Ford, of the Gaboon mission, presented a valuable collection from Western Africa.

*Pisces*.—6 species of fishes have been presented.

*Mollusca*.—A large collection of marine shells from Lower California were presented by Dr. Heermann, and a small collection from Texas by Dr. Engelmann, besides which Mr. Lea presented an interesting specimen of *Pholas dactylus*, piercing gneiss.

*Crustacea*.—Of this class 9 species have been presented, principally by the Smithsonian Institution.

*Insecta, Myriapoda and Zoophyta*.—A collection of insects and myriapods of Western Africa was presented by Dr. Ford, and several species of insects from the same locality by Dr. Hays. A few insects and echinoderms from Texas were presented by Dr. Engelmann.

*Comparative Anatomy*.—To this department, during the past year, the cabinet has received the richest accessions.

The entire anatomical collection of our late lamented president, Dr. Morton, consisting of 867 human crania, 601 crania of inferior animals, and other osteological specimens, was purchased by a number of members and liberal citizens and presented to the Academy.

Mr. Fahnestock presented a collection of 33 crania of birds and mammals. Besides these 10 other anatomical specimens have been received, among which are a fine cranium of *Phoca leptonyx*, presented by Lieut. M. G. Watson, U. S. N., one of *Auchenia Lama*, presented by Dr. James M. Greene, U. S. N., and one of an aboriginal American by Dr. R. W. Gibbes.

*Botany*.—Our herbarium has been enriched by a collection of Arctic plants, presented by Dr. E. K. Kane, U. S. N., and one of 61 species of woods from Dr. Engelmann, of St. Louis. Besides the above, 59 botanical specimens were presented, among which is a collection of marine algæ from Mr. Ashmead, and 16 species of fruits from Mr. Ellis Yarnall, Jr.

*Palaeontology*.—112 specimens of organic remains have been presented, principally from Dr. A. T. King, Mr. L. J. Germain, and Mr. T. Conrad. Among them is the unique specimen of the *Bathygnathus borealis*, of the New Red Sandstone of Prince Edward's Island, presented by Messrs. Lea, Vaux and Dr. Leidy.

*Mineralogy*.—Of minerals 31 specimens have been presented, principally by Mr. C. M. Wheatley and Dr. Rand.

The above report is respectfully submitted by

JOSEPH LEIDY,  
Chairman of the Curators.

December 27th, 1853.

The Annual Report of the Treasurer was read and referred to the Auditors.

Mr. Vaux offered a Resolution which was adopted, "that the privilege of endorsing tickets of admission to the Museum on public days be granted to Mrs. Wetherill, widow of our late esteemed Vice President, John Price Wetherill, and that she be authorised and invited to visit at all times the Museum and Library of the Academy."

The Society then proceeded to elect Officers and a Publication Committee for the ensuing year. The following members were announced duly elected :

|                                 |   |   |   |   |                                                                                                  |
|---------------------------------|---|---|---|---|--------------------------------------------------------------------------------------------------|
| <i>President,</i>               | - | - | - | - | GEORGE ORD.                                                                                      |
| <i>Vice Presidents,</i>         | - | - | - | - | Robert Bridges, M. D.,<br>Isaac Lea.                                                             |
| <i>Corresponding Secretary,</i> | - | - | - | - | John L. LeConte, M. D.                                                                           |
| <i>Recording Secretary,</i>     | - | - | - | - | B. Howard Rand, M. D.                                                                            |
| <i>Librarian,</i>               | - | - | - | - | Wm. S. Zantzinger, M. D.                                                                         |
| <i>Treasurer,</i>               | - | - | - | - | George W. Carpenter.                                                                             |
| <i>Curators,</i>                | - | - | - | - | Joseph Leidy, M. D.,<br>William S. Vaux,<br>Samuel Ashmead,<br>John Cassin.                      |
| <i>Auditors,</i>                | - | - | - | - | Robert Pearsall,<br>Samuel Ashmead,<br>James C. Fisher, M. D.                                    |
| <i>Publication Committee,</i>   | - | - | - | - | Wm. S. Vaux,<br>Robert Bridges,<br>Isaac Lea,<br>W. S. W. Ruschenberger, M. D.,<br>H. C. Hanson. |

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ELECTION OF MEMBER AND CORRESPONDENT.

John B. Biddle, M. D., of Philadelphia, was elected a *Member*, and Prof. John Le Conte, of Athens, Georgia, was elected a *Correspondent*.

## ERRATA IN VOL. VI.

- Page 2, line 4 from bottom, for *of* read *and*.  
 “ 3, “ 13 “ top, for *Cretacean* read *Cetacean*.  
 “ 33, “ 13 and 20 from bottom, for *Nipongue* read *Mpongue*.  
 “ 36, “ 26 from top, for *undeniable* read *undeniably*.  
 “ 40, “ 19 “ bottom, for *interstialis* read *interstitialis*.  
 “ 45, “ 5 “ top, for *thorace* read *thorax*.  
 “ 46, “ 18 “ bottom, for *simplicibus* read *fulcrantibus*.  
 “ 48, in division (*b*) of *Eucnemis*, for *serratae* read *pectinatae*.  
 “ 66, “ 10 from top, for *is* read *are*.  
 “ 114, “ 2 “ bottom, for *fulvis* read *fulvus*.  
 “ 141, “ 9 “ bottom, for *generus* read *genus*.  
 “ 149, in note (†) for *fr* read *für*.  
 “ 150, the three lines of the diagnosis of *Cephennium corporosum* have lost the initial letters: to the first add *l*, to the second *pl*, to the third *a*.  
 “ 171, line 2 from bottom, for *Africa* read *America*.  
 “ 174, “ 22 “ top, for *inferior* read *anterior*.  
 “ 180, for *Homolosaurus* read *Homalosaurus*.  
 “ 181, for *Pituophis* read *Pityophis*.  
 “ 229, line 21 from top, for *Anchytursus* read *Anchytarsus*.  
 “ “ 40 “ top, for *picea* read *brunneus*.  
 “ 231, after *Tostegoptera*, for *Edwards* read *Blanchard*.  
 “ 241, line 15 from top, for *Enbradys* read *Eubradys*.  
 “ 302, line 13 from top, for 1859 read 1849.  
 “ 327, “ 31 “ top, for *laniata* read *taniata*.  
 “ 329, “ 22 “ top, for *parvus* read *parvulus*, vide p. 414.  
 “ “ 26 “ top, for *Fern* read *Kern*.  
 “ 337, “ 31 “ top, for *Fauna* read *Faunas*.  
 “ 368, “ 12 “ top, for *Traüinfeld* read *Frainfeld*.  
 “ “ 29 “ top, for *truncates* read *truncatus*.  
 “ 377, top line, for — read *and*.  
 “ 376, line 17 from bottom, for *Prisidon* read *Prisodon*.  
 “ 403, “ 2 “ bottom, for *Lyceum* read *State Library*.  
 “ 439, “ 17 “ bottom, for *Agryppus* read *Agrypnus*.  
 “ 454, “ 9 “ bottom, for *Endomochydæ* read *Endomychidæ*.  
 “ lxxviii, line 22 from bottom, add *Mr. T. A. Conrad*.  
 “ lxxiv, line 17 from top, for *Vorselemque* read *Vorlesungen*.

The following omissions of donations to the Library, August 10th, 1852, occurred at page xxxiii:

Description of a Skeleton of the *Mastodon giganteus*, of North America. By John C. Warren, M. D. 4to. From the Author.

Exploration and Survey of the Valley of the Great Salt Lake of Utah. By Howard Stansbury, Capt. U. S. Topograph. Eng. 8vo. and map. From Col. J. J. Abert.

Experimental Researches in Electricity, 29th series. By Michael Faraday, Esq. From the Author.

On the Physical Character of the Lines of Magnetic Force. By Michael Faraday, Esq. From the Author.

Zoology of the Great Salt Lake of Utah, (extracted from Capt. Stansbury's Report.) From Prof. S. F. Baird.

Geognostische Wanderungen im Gebiete der nordöstlichen Alpen. Von Carl Ehrlich. From the Author.

Ueber die nordöstlichen Alpen. Von Carl Ehrlich. From the Author.